0900043180

CORRES CONTROL
OUTGOING LTR NO

DOE ORDER# 5400.1

94 RF 09294

DIST	TR	ENC
AMARAL M E		
BURLINGAME A H	X	
BUSBY W S		
BRANCH D B		
CARNIVAL G J		
DAVIS J G		
FERRERA D W		
FRAY, R E		
GEIS J A		
GLOVER, W S		
GOLAN P M		
HANNI, B J		
HARMAN, L K		
HEALY, T J		
HEDAHL, T		
HILBIG, J G		
HUTCHINS, N M		
JACKSON, D T		
KELL, R E		
KUESTER, A W		
MARX, G E		
McDONALD, M M		
McKENNA, F G		
MONTROSE, J K		
MORGAN, R V		
POTTER, G L		
PIZZUTO, V M		
RISING, T L		
SANDLIN, N B		
SCHWARTZ, J K		
SETLOCK, G H		
STEWART, D L		
STIGER, S G	X	
TOBIN, P M		
VOORHEIS, G M		
WILSON, J M		
C. A Bicker	✓	✓
M. J. Buddy	✓	✓
B. H. Hallowell	✓	✓
E.C. Mack	✓	✓
E.A. Peterson	✓	✓
CORRES CONTROL	X	X
ADMN RECORD/080	X	x(2)
TRAFFIC		
PATS/T130G	✓	✓

CLASSIFICATION

UCNI		
UNCLASSIFIED	✓	✓
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER SIGNATURE
DOCUMENT CLASSIFICATION REVIEW WAIVER PER CLASSIFICATION OFFICE

ADMN REPLY TO RFP CC NO
14-RF 09005

ACTION ITEM STATUS
PARTIAL/OPEN
☐ CLOSED

TR APPROVALS
VAH

ORIG & TYPIST INITIALS
VAH/RCT

48469 Rev 6/94

EG&G ROCKY FLATS

EG&G ROCKY FLATS INC
ROCKY FLATS PLANT P O BOX 464 GOLDEN COLORADO 80402 0464 (303) 966 7000

September 14 1994

94 RF 09294

J M Roberson
Acting Assistant Manager
for Environmental Restoration
DOE RFFO

Attn J Pepe

CURRENT STATUS POLYCHLORINATED BIPHENYL (PCB) TISSUE SAMPLING FOR WALNUT CREEK WOMAN CREEK AND OFFSITE (09005) SGS 500 94

Action None

Results of the Operable Unit No 6 (OU6) pond sediment and tissue sampling project for the Environmental Evaluation (EE) portion of the Resource Conservation and Recovery Act (RCRA) *Facility Investigation/Remedial Investigation* (RFI/RI) *indicated that detectable levels of PCBs are* found in minnows from some A and B series ponds These levels were found to be below 500 ug/kg but at levels that can cause adverse effects on some sensitive fish species Whole body concentrations of 400 ug/kg resulted in reproductive impairment in rainbow trout (EPA 1980) but *non salmonid species appear to be less sensitive* Eisler (1986) *recommends a maximum body* burden for trout at 400 ug/kg fresh weight No recommendations were provided for non salmonid species These levels are not known to effect species existing at Rocky Flats Environmental Technology Site (RFETS)

Environmental Protection Agency (EPA) based its Ambient Water Quality Criterion (AWOC) (0 014 ug/l) and Sediment Quality Criterion (SQC) (19 ug PCBs/g total organic carbon) on protection of wildlife feeding in aquatic habitats (EPA 1980) Each of these criteria is based on preventing bioaccumulation of PCBs in aquatic invertebrates and fish to levels above 640 ug/kg the level producing reproductive impairment in mink (Platonow and Karstad 1973)

PCB concentrations in some of the sediments and biota from the Walnut Creek drainage slightly exceed the above noted levels Ponds in the A series did not contain detectable quantities of PCBs in sediments The maximum PCB content in sediments in the B series is 1300 ug/kg in shallow sediments (less than six inches deep) and 10 000 ug/kg occurring below two feet in depth The EPA SQC for sediments in the A and B series ponds is approximately 300 ug/kg Bass from A 2 pond the top aquatic predator in the ponds contain PCBs ranging from 40 to 57 ug/kg The maximum concentration in fish tissue collected was about 500 ug/kg in fat head minnows from B-4 pond A comparison of the fat head minnow tissue results between B 4 and B 5 pond indicates that the PCBs are confined primarily to the upper B series ponds as evidenced by the significantly lower concentrations of PCBs in fat head minnow tissue in B-5 pond The maximum values are restricted to B-4 pond Attachment 2 (Table 1) contains the preliminary data from the recent OU6 sampling where PCBs were detected in the tissues

The contracted laboratory is currently processing the samples that have been collected for PCB analysis from several onsite ponds and the offsite reservoirs in OU3 The following results were verbally transmitted on Thursday September 1

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A-0005 000520

Location	Sample Type	PCB ug/kg Aroclor 1254	Sample Date
Great Western	Carp	Below Detection Limit	August 19 1994
Great Western	Carp	Below Detection Limit	August 19 1994
Great Western	Carp	Below Detection Limit	August 19 1994
Great Western	Carp	52 4 ug/kg	August 19 1994
Great Western	Carp	Below Detection Limit	August 19 1994
Great Western	Carp	Below Detection Limit	August 19 1994

According to the contracted laboratory the large whole body samples have slowed the grinding process considerably They have committed to deliver the data as soon as possible The fish samples from Standley Lake Reservoir Mower Reservoir and one minnow sample from Great Western Reservoir will be verbally transmitted on September 15 1994 or early September 16 1994 These were originally scheduled to be transmitted on September 8 1994 but have been delayed due to laboratory equipment failure The analytical results for the crayfish and minnows collected from C 1 C 2 D 1 D 2 and the pond at Walnut and Indiana will be completed and verbally transmitted to EG&G on September 19 1994

When the analytical results are completed and transmitted to EG&G a data summary and short write up will be transmitted to DOE RFFO

Appendix I to the Operable Unit 6 Work Plan Addendum No 1 Additional Pond Sediment Investigations will be revised to encompass the tissue sampling completed in Great Western Reservoir Standley Lake Reservoir Mower Reservoir C 1 pond and C 2 pond The document will address the sampling that occurred in OU3 OU5 and OU6 for PCBs in tissues and pond sediment The results will be evaluated and incorporated into the respective EE report for the Baseline Risk Assessment

Please call Neil Holsteen at extension 6987 or Frank Vertucci at extension 3427 if you have any questions

S G Stiger Director
Environmental Restoration Program Division
EG&G Rocky Flats Inc

NAH rct

Orig and 1 cc J M Roberson

Attachments
As Stated

cc
M N Silverman DOE/RFFO

References Cited

Eisler R 1986 Polychlorinated Biphenyl Hazards to Fish Wildlife and Invertebrates A Synoptic Review U S Fish and Wildlife Service Biological Report 85 (1 7)

EPA 1980 40 FR 791318 Ambient Water Quality Criteria

Platonow N S and Karstad L H 1973 Dietary Effects of Polychlorinated Biphenyls on Mink *Can J Comp Med* 30 397 400

Table 1_
Preliminary OU6 Tissue PCB Data

Pond	Sample Type	Species	PCB ug/kg Aroclor 1254	Sample Date
A 2	Bass	*Micropterus salmonoides*	40	7/14/94
A 2	Bass	*Micropterus salmonoides*	47	7/14/94
A 2	Bass	*Micropterus salmonoides*	56	7/14/94
A 4	fat head minnow	*Pimiphales promelas*	14	7/12/94
A 4	fat head minnow	*Pimiphales promelas*	14	7/12/94
A 4	fat head minnow	*Pimiphales promelas*	24	7/12/94
B 1	tiger salamander	*Ambystoma tigrinum*	40	7/14/94
B 1	tiger salamander	*Ambystoma tigrinum*	25 9	7/15/94
B 2	tiger salamander	*Ambystoma tigrinum*	59	7/15/94
B 2	tiger salamander	*Ambystoma tigrinum*	134	7/15/94
B 2	tiger salamander	*Ambystoma tigrinum*	105	7/14/94
B 4	plant		23	6/9/94
B 4	insect		40	6/7/94
B 4	fat head minnow	*Pimiphales promelas*	479	6/10/94
B 4	fat head minnow	*Pimiphales promelas*	498	6/10/94
B 4	fat head minnow	*Pimiphales promelas*	464	6/10/94
B 5	fat head minnow	*Pimiphales promelas*	168	6/20/94
B 5	fat head minnow	*Pimiphales promelas*	170	6/20/94
B 5	fat head minnow	*Pimiphales promelas*	140	6/20/94